

AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions, and listings, of the claims in the application.

1-16. (Cancelled)

17. (New) A method of manufacturing a magnet roller in which a resin-bonded magnetic material, which is composed primarily of magnetic powder and a binder, is injected in a melted state into a product cavity within a metal mold while applying a magnetic field thereto, wherein the metal mold comprises a fixed metal mold forming the periphery of the product cavity and a movable metal mold forming at least an end of the product cavity and having a cylindrical concave portion in order to form a shaft portion of the magnet roller on an end of the magnet roller body integrally and in a protruding fashion, and wherein a magnetic field generator is disposed around the metal mold, the method comprising the steps of:

injecting the resin-bonded magnet material into the product cavity and the injection of the resin-bonded magnet material being initiated when the state of disposition of the movable metal mold is such that the volume of the product cavity is small;

moving the movable metal mold by the force of the flow of resin-bonded magnetic material injected into the cavity, such that the volume of the product cavity is increased in accordance with the amount of the resin-bonded magnet material injected into the product cavity; and

applying a magnetic field to the product cavity by the magnet field generator disposed around the metal mold while the resin-bonded magnetic material is being injected into the product cavity.

18. (New) The method according to claim 17, wherein the state of disposition of the movable metal mold in which the volume of the product cavity is small is such that the

movable metal mold is disposed near an injection opening formed in the fixed metal mold, and wherein the movable metal mold is moved away from the injection opening by the force of the flow of the resin-bonded magnet material injected through the injection opening.

19. (New) A method of manufacturing a magnet roller in which a resin-bonded magnetic material, which is composed primarily of magnetic powder and a binder, is injected in a melted state into a product cavity within a metal mold while applying a magnetic field thereto, wherein the metal mold comprises a fixed metal mold forming the periphery of the product cavity and one end of the product cavity and a movable metal mold forming the other end of the product cavity and having a cylindrical concave portion in order to form a shaft portion of the magnet roller on an end of the magnet roller body integrally and in a protruding fashion, and wherein a magnetic field generator is disposed around the metal mold, the method comprising the steps of:

injecting the resin-bonded magnet material into the product cavity and the injection of the resin-bonded magnet material being initiated when the state of disposition of the movable metal mold is such that the volume of the product cavity is small;

moving the movable metal mold by the force of the flow of resin-bonded magnetic material injected into the cavity, such that the volume of the product cavity is increased in accordance with the amount of the resin-bonded magnet material injected into the product cavity; and

applying a magnetic field to the product cavity by the magnet field generator disposed around the metal mold while the resin-bonded magnetic material is being injected into the product cavity.

20. (New) The method according to claim 19, wherein the state of disposition of the movable metal mold in which the volume of the product cavity is small is such that the movable metal mold is disposed near an injection opening formed in a portion which forms one end of the fixed metal mold, and wherein the movable metal mold is moved away from the injection opening by the force of the flow of the resin-bonded magnet material injected through the injection opening.

21. (New) The method according to claim 20, wherein the injection opening is open in a portion which forms one end of the product cavity of the fixed metal mold so that the injection opening faces the cylindrical concave portion of the movable metal mold.

22. (New) A method of manufacturing a magnet roller in which a resin-bonded magnetic material, which is composed primarily of magnetic powder and a binder, is injected in a melted state into a product cavity within a metal mold while applying a magnetic field thereto, wherein the metal mold comprises a fixed metal mold forming the periphery of the product cavity and one end of the product cavity and having a cylindrical concave portion in order to form a shaft portion of the magnet roller on one end of the magnet roller body integrally and in a protruding fashion and a movable metal mold forming the other end of the product cavity and having a cylindrical concave portion in order to form a shaft portion of the magnet roller on the other end of the magnet roller body integrally and in a protruding fashion, and wherein a magnetic field generator is disposed around the metal mold, the method comprising the steps of:

injecting the resin-bonded magnet material into the product cavity and the injection of the resin-bonded magnet material being initiated when the state of disposition of the movable metal mold is such that the volume of the product cavity is small;

moving the movable metal mold by the force of the flow of resin-bonded magnetic material injected into the cavity, such that the volume of the product cavity is increased in accordance with the amount of the resin-bonded magnet material injected into the product cavity; and

applying a magnetic field to the product cavity by the magnet field generator disposed around the metal mold while the resin-bonded magnetic material is being injected into the product cavity.

23. (New) The method according to claim 22, wherein the state of disposition of the movable metal mold in which the volume of the product cavity is small is such that the movable metal mold is disposed near an injection opening formed in a portion which forms one end of the fixed metal mold, and wherein the movable metal mold is moved away from the injection opening by the force of the flow of the resin-bonded magnet material injected through the injection opening.

24. (New) The method according to claim 23, wherein the injection opening is open in the cylindrical concave portion of a portion which forms the end of one side of the product cavity of the fixed metal mold so that the injection opening faces the cylindrical concave portion of the movable metal mold.

25. (New) The method according to claim 24, wherein the injection opening is open in the bottom portion of the cylindrical concave portion.